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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,233	01/16/2002	Robert E. Stengel	CM03359J	6380

7590 04/05/2006
Andrew S. Fuller
Motorola, Inc.
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8000 West Sunrise Boulevard
Fort Lauderdale, FL 33322

EXAMINER

WONG, LINDA

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,233

Applicant(s)

STENGEL ET AL.

Examiner

Linda Wong

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 3-5, 11, 13-15, 17-19, 34, 36-39, 52, 54-56, 59, 60, 71 and 79 is/are allowed.
- 6) ☐ Claim(s) 8, 9 and 80 is/are rejected.
- 7) ☐ Claim(s) 10, 40, 42-49, 57, 58, 73 and 75-78 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 3-5,8,9,11,13-15,17-19,34,36-40,49,52,54-57,59,60,71,73,79 and 80.

Response to Arguments

1. Applicant's arguments, see Applicant's Response, filed 1/19/2006, with respect to the rejections as stated in the office action mailed 10/05/2005 have been fully considered and are persuasive. The rejections and objections of claims 3-5,11,13-15,17-19,34,38,40,49,52-56,59-60,71 has been withdrawn.

Claim Objections

2. **Claims 40,49,57,73** are objected to because of the following informalities:
 - a. **Claim 40, line 14**, recites the limitation "Cj(t) comprises Cja(t) and Cjb(t)". The limitation Cja(t) lacks sufficient antecedent basis. The specification states "the outputs of adders 506 and 510 are two sets of time varying tap addresses Cjb(t) and Cjc(t) used to address a pair of multiplexers 514 and 516, respectively, to produce a pair of time varying signals shown as V1(t) and V2(t)." (page 20, lines 15-18) It is suggested by the examiner to change the limitation to "Cjc(t)".
 - b. **Claim 40, lines 21-22**, recites the limitation "a summation circuit that adds V1(t) to V2(t) to obtain an amplitude modulated output signal V(t)" and "a multiplexer circuit and wherei nteh time varying tap addresses Cj(t) are applied to the multiplexer circuit to select a time varying sequence of tap outputs as an amplitude modulated output signal Fout(t) and where in the tap processor comprising: ..." The limitation an amplitude modulated output signal is mentioned twice but no antecedent basis is made. How does V(t) relate to Fout(t), such as $V(t) = Fout(t)$?

- c. **Claim 49, line 7-10**, recites the limitation “applying addresses of the first sequence of tap outputs to a first multiplexer to select the first sequence of tap outputs; and applying addresses of the second sequence of tap outputs to a second multiplexer to select the second sequence of tap outputs;” The limitation from the above quoted recitation “... to select the first sequence of tap outputs..” and “... to select the second sequence of tap outputs...” is unclear as to whether the applicant is referring to the limitations on lines 3-6 “selecting a first sequence of tap outputs ...” and “selecting a second sequence of tap outputs...” It is suggested by the examiner the limitation “a first multiplexer ... to select the first sequence of tap outputs ...” is referring to the limitation “.. selecting a first sequence of tap outputs...” and the same for the limitation regarding “select the second sequence of tap outputs ...” Thus, it is suggested by the examiner to change the limitations on lines 7-10 to “applying addresses of the first sequence of tap outputs to a first multiplexer to [perform selecting] select the first sequence of tap outputs; and applying addresses of the second sequence of tap outputs to a second multiplexer to [perform selecting] select the second sequence of tap outputs”.
- d. **Claim 57, lines 1-2**, recites the limitation “the first and second multiplexers are connected to the tap outputs in a manner such that a tap address CLa selects” in claim 56. There is insufficient antecedent basis for the limitation “CLa” in the claim.

- e. **Claim 73, line 9**, recites the limitation "Cj(t) comprises Cja(t) and Cjb(t)". The limitation Cja(t) lacks sufficient antecedent basis. The specification states "the outputs of adders 506 and 510 are two sets of time varying tap addresses Cjb(t) and Cjc(t) used to address a pair of multiplexers 514 and 516, respectively, to produce a pair of time varying signals shown as V1(t) and V2(t)." (page 20, lines 15-18) It is suggested by the examiner to change the limitation to "Cjc(t)".
- f. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 3. **Claims 8 and 9** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
 - a. **Claim 8, lines 19 and 22**, recite the limitation "a first demultiplexer" and "a second demultiplexer responsive to the tap selection processor to selectively route the selected [first and] second set of the plurality of selected tap outputs to the common node to produce the [first and] second output signal." Fig. 4 and 6 show a first and second multiplexers. (Fig. 4, labels 270A and 270B and Fig.

6, labels 370A and 370B) The claimed limitation does not match the enabled specification.

- b. **Claim 9, lines 7 and 15**, inherits all the limitations of claim 8.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 80** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. **Claim 80, lines 1-2**, recite the limitation "the algorithm selects the value of P for 0.Q operational cycles and P+1 for 1-0.Q operation cycles." It is unclear as to what the definition of the limitations "0.Q" and "1-0.Q". Is $P=0$ for 0.Q given the tap address is P.Q? How is a decimal "0.Q", operational cycles determined? Is the limitation "1-0.Q" an equation? For example, if $P=3$ and $Q=2$, $1-0.2=.8$? Furthermore, the specification states "In this method, the algorithm selects the value of P for 1-0.Q operational cycles and P+1 for 0.Q operational cycles as illustrated in the example above where $P=6$ and $Q=4$ so that out of an operational cycle of 10 tap selections, the tap address is selected as $P=6$ for $10-Q=6$ times and $P+1=7$ for $Q=4$ times." (page 7, lines 6-19) The specification does not match the claimed limitation.

Allowable Subject Matter

5. **Claims 3-5,11,13-15,17-19,34,36-39,52,54-56,59-60,71,79** are allowed over prior art.
6. **Claim 8-9,80** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraph, set forth in this Office action.
7. **Claim 40,49,57,73** would be allowable if rewritten or amended to overcome the claim objections.
8. **Claims 10,42-48,58,75-78** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linda Wong



DAC HA
PRIMARY EXAMINER